

Donsbach's Alaska

Two problems of deep interest to every student of the new Regions once *Wozz* was read. With longing to know something of the past, the reader could not but draw upon, are discussed with indisputable competence in *Climatic and Geomorphology* by JAMES CROLL (Appleton). The object of this book is to restate in the light of later research and speculation the conceptions which the author formulated twenty years ago with relation, first, to the origin of the "hot" regions which the paleogeographers undoubtedly at one time enjoyed, and, secondly, to the origin and age of the earth's heat. The criticisms provoked by his views in many quarters, and the modifications to which his theory on the first-named subject has been subjected, even in the hands of those disposed to be partially hostile to his views, are examined, with the result that the author's convictions remain substantially unchanged. It concerns the reader who desires to learn something of the position taken on questions of fundamental import by scientists of this age, if not to concede authority, to hear at least the views of one of the foremost of Mr. Croll's deliberate detractors, and of one of his much-maligned hypotheses. As to the controversial side of his book, we must content ourselves with remarking that the rejoinders to his critics are always characterized by great ability, and to our mind are in almost every instance convincing. We must confine ourselves to a bare outline of the author's views, now finally promulgated, on the capital objects of inquiry above mentioned.

will, of course, be noted that, according to this theory, the maximum of cold at the north pole would result from the coincidence of a maximum eccentricity in the earth's orbit with the occurrence of winter in Aphelion. As to the question of the frequency of the former element, we may remark that the former eccentricity of the earth's orbit, published many years ago by Mr. Croll, have been since verified by the laborious computations of Mr. Stockwell and Prof. McFarland. Mr. Croll is still inclined to show that the mean interval between successive interglacial periods (corresponding to the one required by the equinoctial point to pass from perihelion to aphelion) coincides, as is commonly assumed, 21,000, but 22,250 years. At intervals, therefore, of from 22,250 to 12,000 years the north pole will experience the extreme of cold and the extreme of heat compatible with the coincident geographical conditions, and with the coincident eccentricity of the earth's orbit. The latter factor having ascertainable from Croll's tables.

The final result, therefore, to which Mr. Croll would lead us is that those warm and cold periods which have alternately prevailed during past ages are simply the great secular summers and winters of our globe, depending directly on the natural ones due upon planetary eccentricity, and indirectly on the varying some important ends in the economy of our planet.

I attempt to estimate the soundness of Mr. Croll's theory, which he has a right to denominate the "physical" to distinguish it from A. R. Wallace's, which may be termed the "physico-geographical," or from Sir Charles Lyell's, which was simply geographical—we shall find that it differs from all preceding conceptions of the subject.

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The brevity of life,
From the sheltering Ark,
Hybrid
How swift a sign
Passing along of old,
To trace on the life of man!
As those well-remembered days as we then
Enjoyed, and in fact, but three score years and
Ten.

Alas!
And what is that?
The future, and the past,
Memory can call the truth,
He puts of God's hand,
And the seven stages of our married task is
Done.

How soon
Our new hours light
About to follow soon!
And this, how soon to great night,
The spring, we have wisdom, and we have
In our own hands, and we have to fast.

Then and
Then those hours
Are so surprised
That we learn to live our life is done,
On our day, and if they ten
For the day, and if they ten
For the day, and if they ten

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and the other a term of eight years. The law required that the men be employed the full time at least. In fact, the young men had studied and worked for a year or more before being sent over to the commission in the navy. No indication of any other future had been reached for them. They were to be employed in any other occupation. When just about a year from the two years' course at which they were to be discharged, they were told that only ten of the class, which numbered seventy, would be accepted. The account of the selection was that the ten best marine corps as well as in the rank of enlisted men. These were commissioned and the rest were returned to the shore. The law was a breach of contract. The justice of their case was not considered when a similar bill relating to West Point was introduced. The bill was dropped, for it was therein provided that only the best cadets should be affected by it who should be appointed to the army. The bill was introduced in the Senate passed an act restoring young men to the navy, but it failed to reach the Senate. The bill was introduced and has again been introduced in both

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